

A segmented radial spatial light modulator has an active optic area comprising a plurality of radially extending active optic modulators disposed at various angular orientations with respect to a central axis. The segmented radial spatial light modulator is used in separating and isolating portions of Fourier transform optic patterns from images for characterization of images by shape for recording, storing, retrieving, searching, and comparison to other images for matches and near matches. The images can be ghosted to increase optical power in the Fourier transform optic pattern without adding new shape content and for grading comparisons to other image shape characteristics for identifying near matches in addition to matches.